

FIG.1

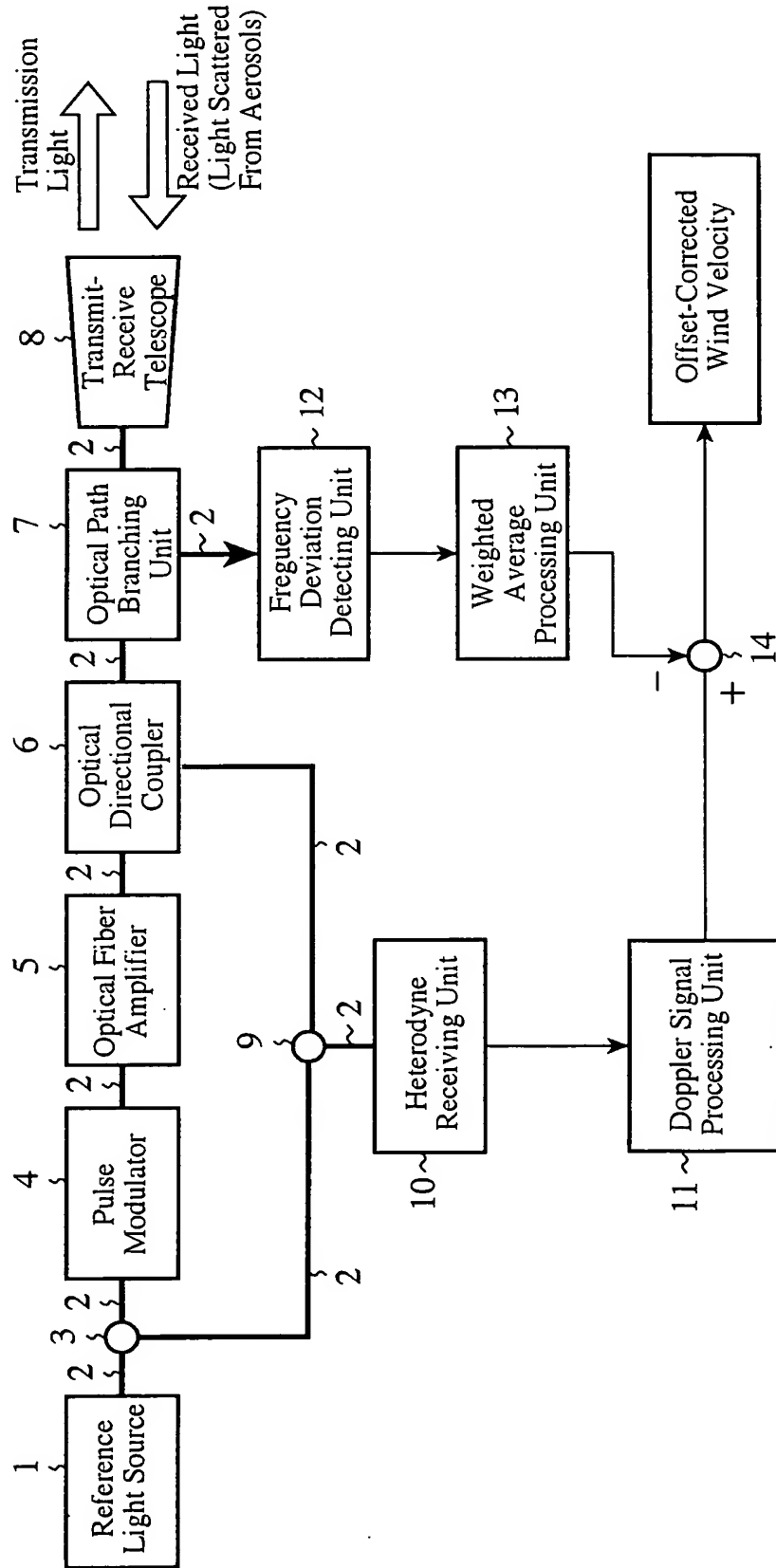


FIG.2

Example of Velocity Offset ΔV_{offset} Which Is Calculated Based
On Both Frequency Deviation f_{chirp} of Pulsed Transmission
Light of Wavelength $\lambda = 1.5 \mu\text{m}$, And Equation (2)

Object Distance Resolution [m]	Transmission Light Pulse Width [μsec]	Transmission Light Frequency Deviation [MHz]	Offset Wind Velocity [m/s]
37.5	0.25	-1.01	0.76
75	0.5	-0.41	0.31
150	1.0	-0.20	0.15

FIG.3

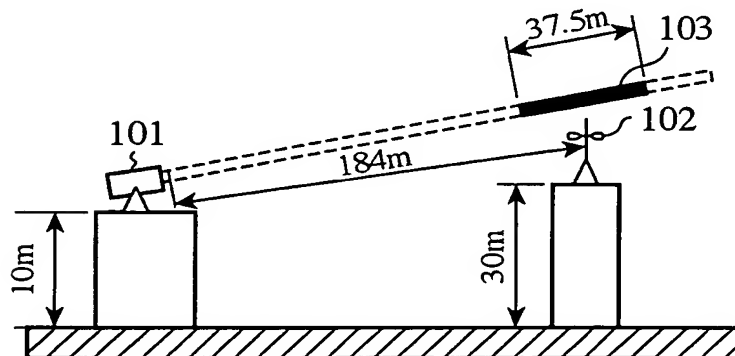
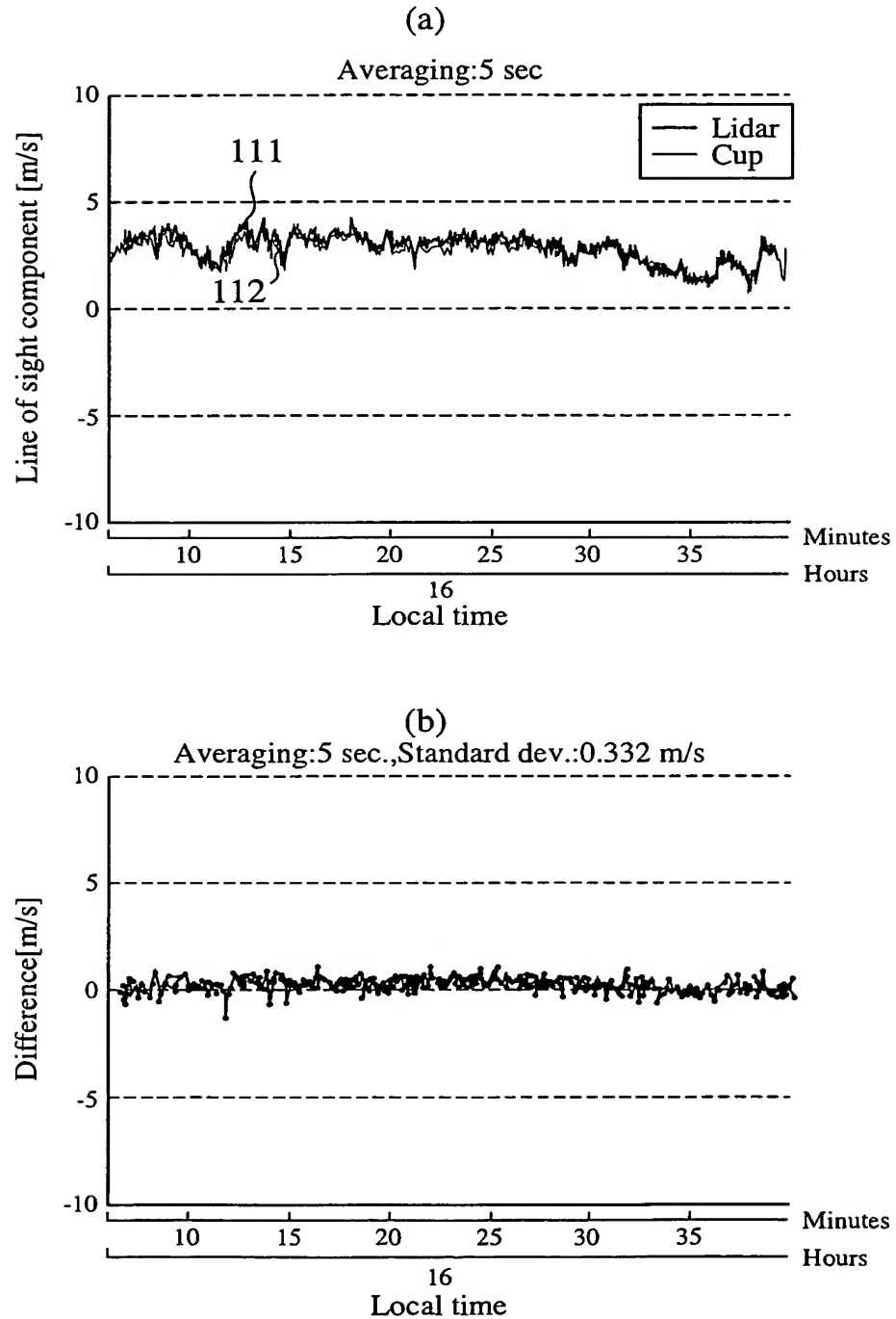


FIG.4



Result of Verification Experiment of Wind Velocity Offset Correction
 (a) Time Series Data On Wind Velocities Measured By Both Measuring Instruments(398 5-Second Averaged Points)
 (b) Difference Between Wind Velocities Measured By Both Measuring Instruments

FIG.5

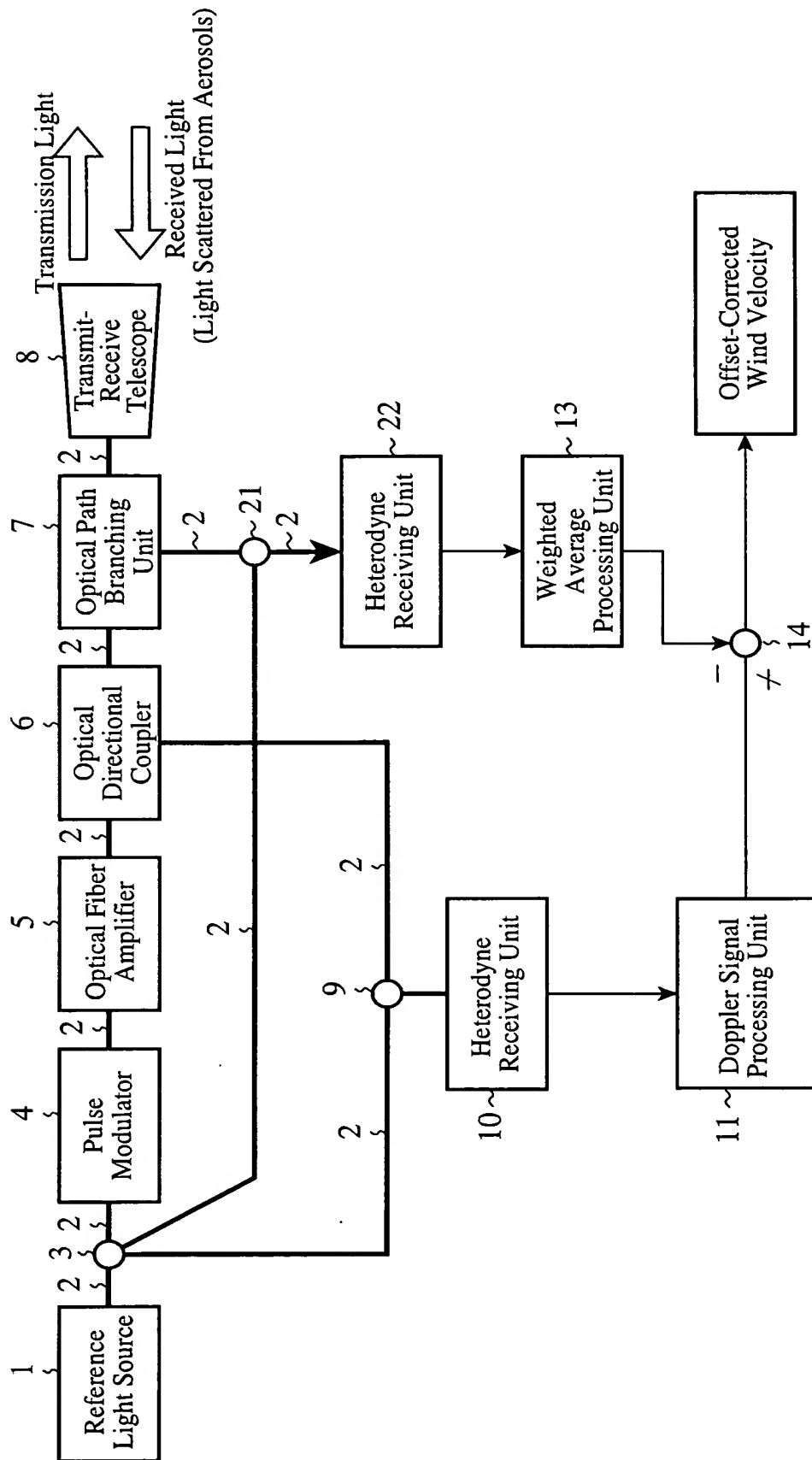


FIG.6

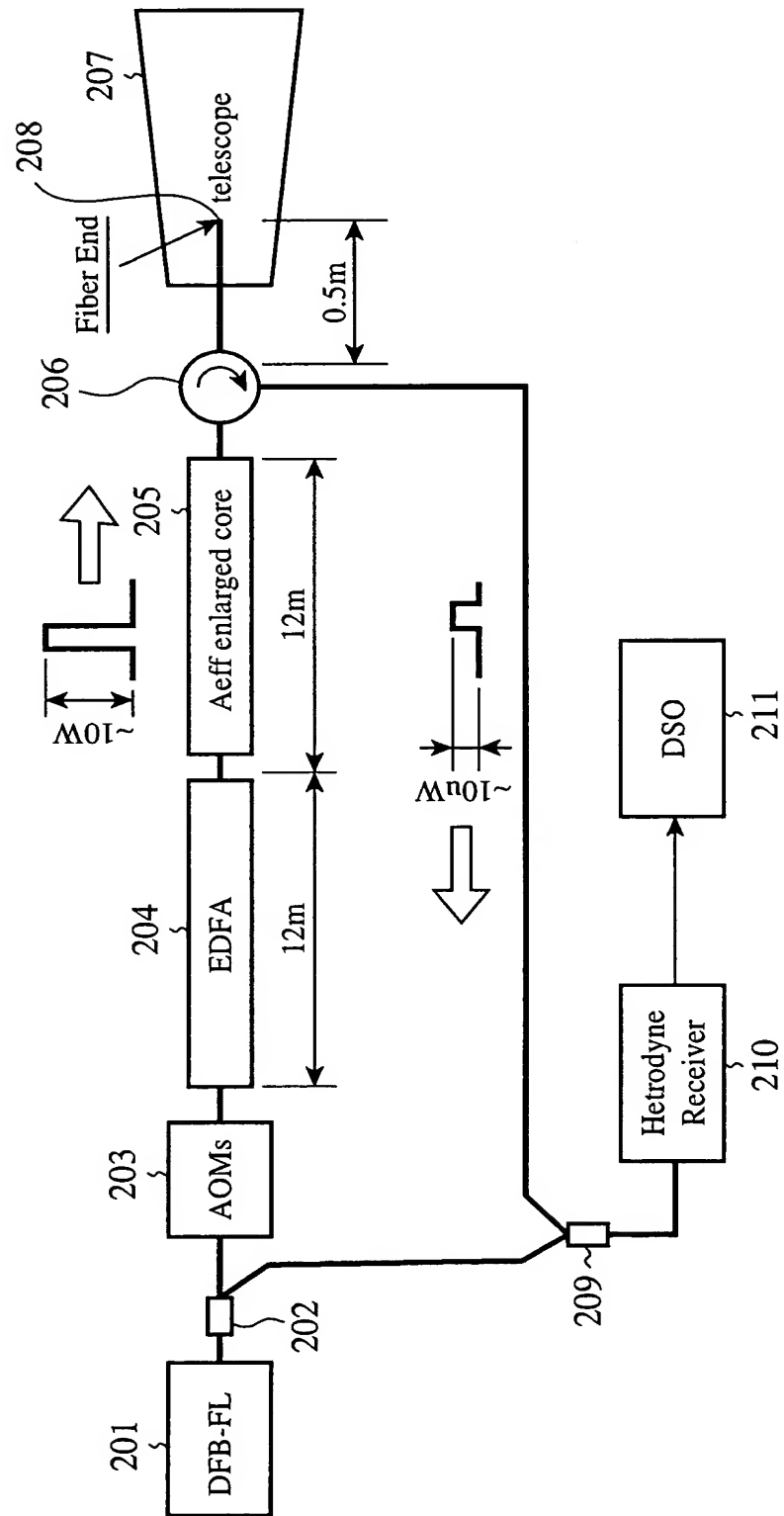
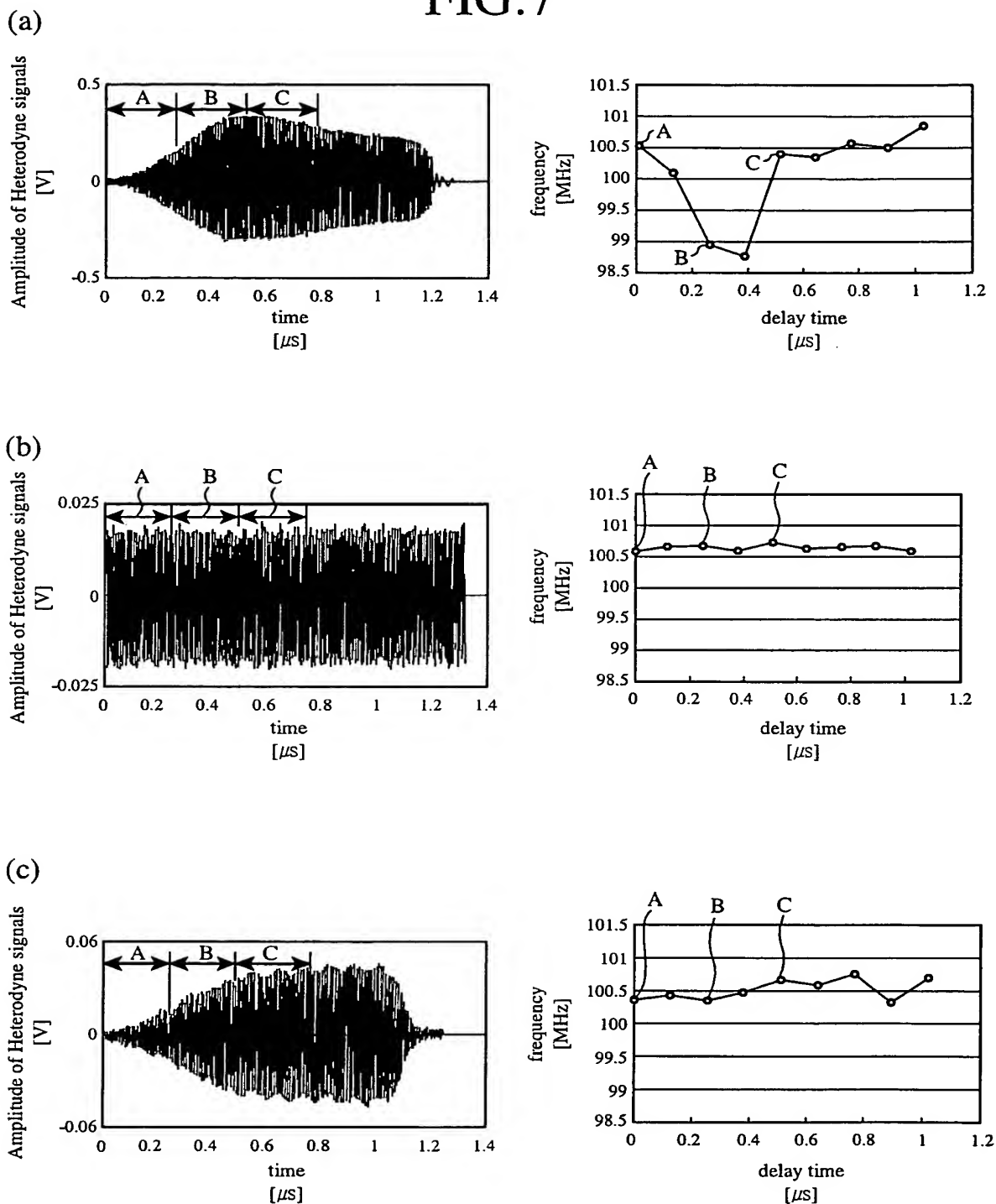


FIG.7



Time Series Data (Shown On Left-Hand Side) On Heterodyne-Detected Signal of Internally-Reflected Light, And Frequency-Analysis Result (Shown On Right-Hand Side)

(a)When Pulsed Transmission Light Is Output Using EDFA

(b)When CW (Continuous Wave) Transmission Light Is Output

(c)When Pulsed Light Output From AOM Is Properly Attenuated And Heterodyne-Detected

FIG. 8

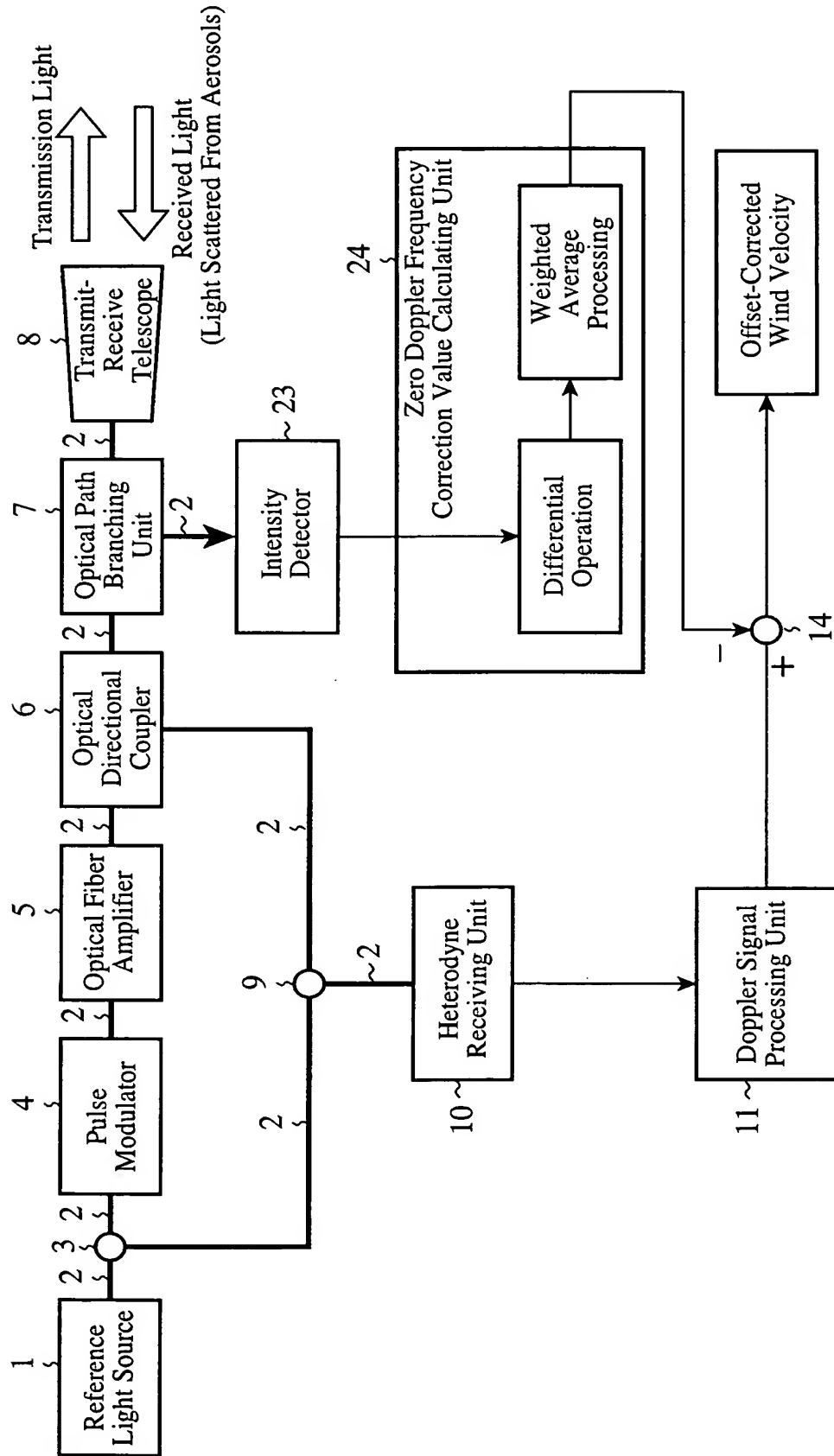


FIG.9

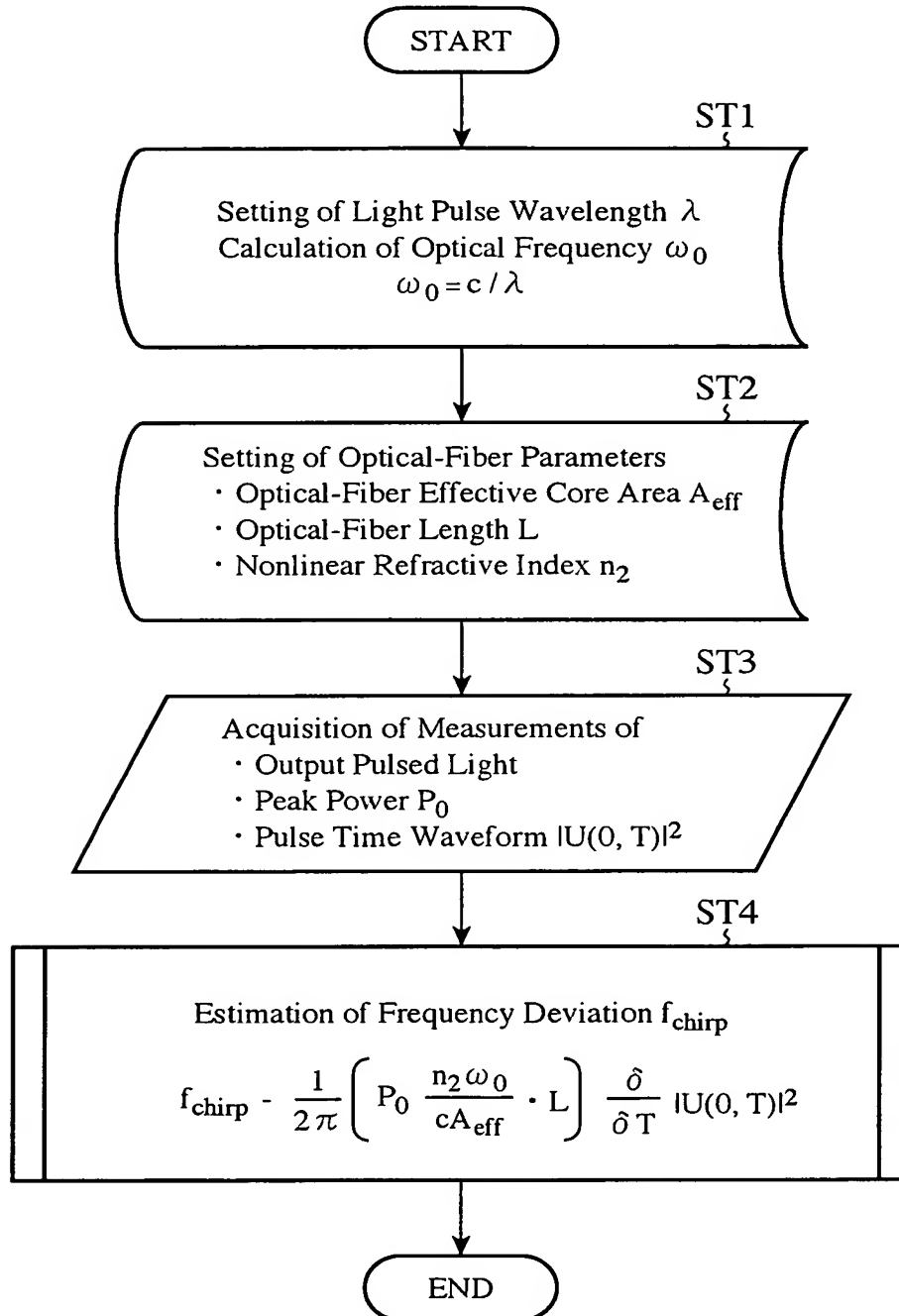


FIG.10

Output Pulse Intensity Waveform of Transmission Light

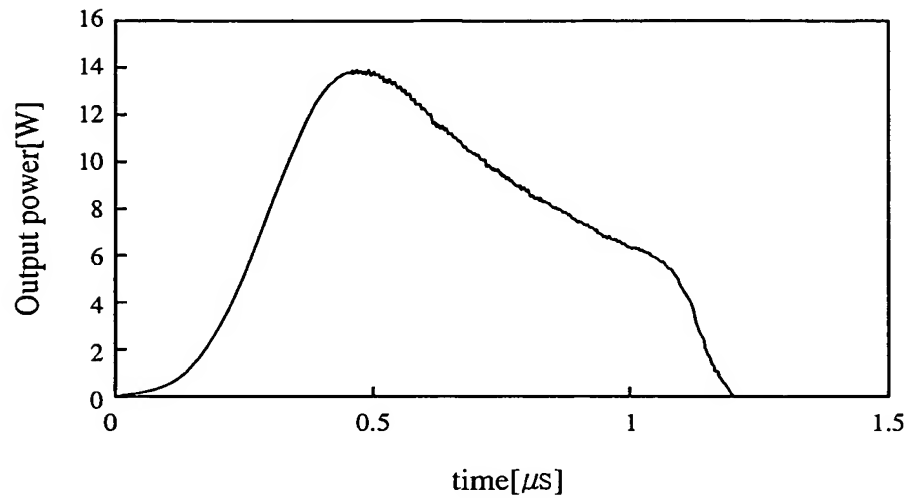


FIG.11

Computed Result of Transmission Light Frequency Deviation Which Is Based On Self-Phase Modulation

